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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,421	12/23/2003	Minoru Miyatake	032204	7515

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WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP  
1250 CONNECTICUT AVENUE, NW  
SUITE 700  
WASHINGTON, DC 20036

EXAMINER

SANTIAGO, MARICELI

ART UNIT PAPER NUMBER

2879

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/743,421

Applicant(s)

MIYATAKE, MINORU

Examiner

Mariceli Santiago

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 7-10 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

The Amendment, filed on September 11, 2006, has been entered and acknowledged by the Examiner.

Cancellation of claim 2 has been entered.

Claims 1 and 3-10 are pending in the instant application.

### ***Claim Objections***

Claim 3 is objected to because of the following reasons,

Claim 3 recites "wherein said at least one luminescent material is a phosphorescent material", the recitation is objectionable since it is considered to conflict with the limitation of claim 1 which states that the "luminescent material is a fluorescent material", while phosphorescent or fluorescent materials are a luminescent phenomena, the two are not equals in operation. Appropriate correction is required.

### ***Terminal Disclaimer***

The terminal disclaimer filed on September 11, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application SN 10/742,785 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2879

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Horiuchi et al. (JP 2002-289925).

Regarding claim 1, Horiuchi discloses an optical element having a plate-like shape (Fig. 1), which comprises a light-transmitting resin (7) and minute regions, the minute regions being dispersedly distributed in the light-transmitting resin and having a birefringence different from the light-transmitting resin (Paragraph [0028]), wherein the minute regions contains at least one luminescent material (8), wherein the at least one luminescent material is a fluorescent material that absorbs any one of ultraviolet light and visible light and emits visible light.

Regarding claims 7 and 10, Horiuchi discloses a polarized-light-emitting surface light source comprising an optical element having a plate-like shape (Fig. 1) and a light source that emits light of a wavelength that is capable of exciting a luminescent material (8) contained in the optical element, the optical element comprising a light-transmitting resin (7) and minute regions, the minute regions being dispersedly distributed in the light-transmitting resin and having a birefringence different from the light-transmitting resin (Paragraph [0028]), wherein the minute regions contains at least one luminescent material (8), wherein the at least one luminescent material is a fluorescent material that absorbs any one of ultraviolet light and visible light and emits visible light, and wherein a display unit comprises the polarized-light-emitting surface light source.

Regarding claim 8, Horiuchi discloses a polarized-light-emitting surface light source further comprising a light guide member (18) for guiding light emitted from the light source to the optical element, the light guide member being made of a light passing material.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horiuchi et al. (JP 2002-289925).

Regarding claim 3, Horiuchi discloses an optical element wherein the minute regions contains at least one luminescent material of the fluorescent kind. Horiuchi fails to exemplify the luminescent material being of the phosphorescent kind. However, one skilled in the art would reasonable contemplate the use of a phosphorescent material instead of a fluorescent material, since the selection of known material on the basis of its suitability for the intended use as a matter of obvious design choice is within the capabilities of one skilled in the art. *In re Leshin*, 125 USPQ 416. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate a phosphorescent material in the optical element of Horiuchi, since the selection of known materials for a known purpose is within the skill of the art.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horiuchi et al. (JP 2002-289925) in view of Miyatake et al. (US 2002/0008807).

Regarding claim 9, Horiuchi exemplifies the use of the optical element in semiconducting light-emitting sources. Although Horiuchi fails to exemplify the application of an electroluminescent element, one skilled in the art would reasonable contemplate the use of the optical element disclosed by Hirouchi in different types of planar light sources in order to provide a optical element for enhancing the light emission emitted from the light source. Accordingly, it

Art Unit: 2879

would have been obvious to one having ordinary skills in the art at the time the invention was made to use the optical element disclosed by Horiuchi in electroluminescent light sources in order to further enhance the light emission emitted from the light source.

***Allowable Subject Matter***

Claims 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 4, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 4, and specifically comprising the limitation of the minute regions are made of any one of a liquid crystal material, a material in glass state that is formed by fixing a liquid crystal phase upon cooling, and a material that is formed by crosslinking and fixing a liquid crystal phase of a liquid crystal monomer upon irradiation of energy rays.

Regarding claim 5, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 5, and specifically comprising the limitation of the minute regions are made of a liquid crystal polymer that has a glass transition temperature of 50t or higher and exhibits a nematic liquid crystal phase at a temperature lower than the glass transition temperature of the light-transmitting resin.

Regarding claim 6, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 6, and specifically comprising the limitation of the expressions established for the refractive index difference between the minute regions and the light transmitting resin as stated in claim 6.

***Response to Arguments***

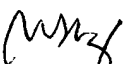
Applicant's arguments with respect to claims 1, 3 and 7-10 have been considered but are moot in view of the new ground(s) of rejection.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariceli Santiago whose telephone number is (571) 272-2464. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Mariceli Santiago  
Primary Examiner  
Art Unit 2879